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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/759,424

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Chikuni Kawakami

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EXAMINER

WANG, KENT F

ART UNIT

PAPER NUMBER

2622

NOTIFICATION DATE

DELIVERY MODE

04/15/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/759,424	Applicant(s) KAWAKAMI, CHIKUNI	
	Examiner KENT WANG	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 5-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2 and 5-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-2 and 5-10 are pending.

Response to Arguments

2. Applicant's arguments with respect to claims 1-2 and 5-10 have been fully considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1 and 5-8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawakami (US 2002/0025157) in view of Miyaji (US 5,231,500).

Regarding claim 1, Kawakami discloses a digital camera having an electronic flash device using a light-emitting diode as a flash light source (the light source part 36 comprising light emitting diodes 38, Fig 3A), comprising:

- a non-volatile memory (a central processing unit 138, Fig 13) storing correction information (e.g. white balance correction value Rg, Gg and Bg) for correcting white balance of an image obtained by flash shooting using the electronic flash device wherein the correction information is for the light only of said light-emitting diode (white balance correction values (gains) Rg, Gg and Bg for adjusting the white

Art Unit: 2622

- balance are outputted from a CPU 138 to the multipliers 130R, 130G and 130B of the white balance adjusting circuit 130) ([0116]-[0119] and [0133]); and
- a white balance correcting device (a white balance adjusting circuit 130) which corrects white balance of the image obtained by flash shooting using the electronic flash device (146) based on the correction information stored in the non-volatile memory (CPU 138) (e.g. corrects a white balance of the color image signals according to the color temperature determined by the color temperature determining device at the shooting irrespective of light emission of the electronic flash light source) ([0030] and [0117]-[0129] , Kawakami).

Kawakami does not disclose the correction information set based on a detection result of a color temperature of light actually emitted from the electronic flash device. However, Miyaji discloses the correction information set based on a detection result of a color temperature of light actually emitted from the electronic flash device (a picture image of the detected object which is taking a picture at a moment of the pushbutton switch 40 is pushed is displayed as a still picture image of which white balance is adjusted corresponding to the color temperature of the flash emitted from the flash device) (10:5-17, Miyaji).

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the flash device as taught by Miyaji into Kawakami's camera, so that the brightness level of the produced picture image signals can be almost equal, the still picture image is displayed without flicker, as the combination to prevent from emitting redundantly is important (10:18-64, Miyaji).

Regarding claim 5, the limitations of claim 1 are taught above, Kawakami discloses an input device (a camera control part 140, Fig 13) for inputting the white balance correction information (the CPU 138 controls the white balance adjusting circuit according to inputs from a camera control part 140), wherein the non-volatile memory (the CPU 138, Fig 13) stores the white balance correction information inputted through the input device (140) ([0117]-[0121], Kawakami).

Regarding claim 6, the limitations of claim 2 are taught above, Kawakami discloses an input device (a camera control part 140, Fig 13) for inputting the modification information (the white balance adjusting circuit 130 outputs the R', G' and B' signals to the gamma correcting circuit 132), wherein the modification information storage device (a memory 136, Fig 13) stores the modification information inputted through the input device ([0117]-[0121], Kawakami).

Regarding claim 7, the limitations of claim 1 are taught above, Kawakami discloses the correction information is set based on a characteristic of the LED (as the white balance adjusting circuit 130 outputs the R', G' and B' signals to the gamma correcting circuit 132, the electronic camera emits the light with the color temperature that is the same as the color temperature of the subject light source, and the white balance is corrected according to the color temperature of the subject light source, the light source part comprising light emitting diodes) ([0031] and [0117], Kawakami).

Regarding claim 8, this claim recites same limitations as claim 7. Thus it is analyzed and rejected as previously discussed with respect to claim 7 above.

Art Unit: 2622

5. Claims 2 and 9-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawakami (US 2002/0025157) in view of Yamamoto (US 6,041,192).

Regarding claim 2, Kawakami discloses a digital camera having an electronic flash device using a light-emitting diode as a flash light source (the light source part 36 comprising light emitting diodes 38, Fig 3A), comprising:

- a non-volatile memory (central processing unit 138, Fig 13) storing correction information (e.g. white balance correction value Rg, Gg and Bg) for correcting white balance of an image obtained by flash shooting using the electronic flash device wherein the correction information is for the light only of said light-emitting diode (white balance correction values (gains) Rg, Gg and Bg for adjusting the white balance are outputted from a CPU 138 to the multipliers 130R, 130G and 130B of the white balance adjusting circuit 130) ([0116]-[0119] and [0133]); and
- a white balance correcting device (a white balance adjusting circuit 130) which corrects white balance of the image obtained by flash shooting using the electronic flash device (146) based on the correction information stored in the non-volatile memory (a CPU 138, Fig 13) (e.g. corrects a white balance of the color image signals according to the color temperature determined by the color temperature determining device at the shooting irrespective of light emission of the electronic flash light source) ([0030] and [0117]-[0129], Kawakami).

Kawakami does not disclose a modification information storage device and a modifying device which modifies the correction information. However, Yamamoto discloses a digital camera (an electro-developing type camera) having an electronic flash device using a light-

Art Unit: 2622

emitting diode as a flash light source (main light source 42 has a plurality of LEDs, photodiodes), comprising:

- a modification information storage device (an IC memory card, for example, in an image recording device 67, Fig 2) which stores modification information (pixel signals outputted from the image process circuit 63) for correcting the correction information (30Q) stored in the non-volatile memory (64), the modification information storage device (67) storing the modification information required to make the correction information (30Q) stored in the non-volatile memory (64) coincident with correction information set based on a detection result of light actually emitted from the electronic flash device (the information codes 30Q correspond to the color temperature, therefore, when the images are read from the image recording areas 30G, 30R, and 30B by the line sensor 44, the amount of light emitted by the LED 42b of the main light source 42 is adjusted based on the transmittances of the information codes 30Q, so that the white balance adjustment can be performed) (12:18-25),
- a modifying device (image processing circuit 63, Fig 2) which modifies the correction information (30Q) based on the modification information (pixel signals outputted from the image process circuit 63) stored in the modification information storage device (an image recording device 67, Fig 2) (5:26-41); and
- the white balance correcting device (white balance sensor 75, Fig 2) corrects the white balance of the image obtained by flash shooting (the light emitted by the LED 42b of the main light source 42, Fig 2) based on the correction information modified by the modifying device (63) (7:41-8:5 and Figs 5A-5B, Yamamoto).

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the image processing circuit as taught by Yamamoto into Kawakami's camera, so that when the images are read from the image recording areas by the line sensor, the amount of light emitted by the LED of the main light source is adjusted based on the transmittances of the information codes, therefore the white balance adjustment can be performed more efficiently (12:18-24, Yamamoto).

Regarding claim 9, the limitations of claims 1 and 7 are taught above, Yamamoto discloses the characteristic of the LED is stored in the non-volatile memory as the characteristic of the LED changes with time (the amount of light emitted by the LED 42b of the main light source 42 is adjusted based on the information codes 30Q which is corresponding to information such as a photographed date and time, a color temperature information, and so on) (6:31-46 and 12:18-25, Yamamoto).

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the flash device as taught by Yamamoto into Sakurada and Kawakami's camera, so that the white balance adjustment can be easily performed (12:18-25, Yamamoto).

Regarding claim 10, this claim recites same limitations as claim 9. Thus it is analyzed and rejected as previously discussed with respect to claim 9 above.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Art Unit: 2622

- Garriss (US 5,010,412) provides an improved light source that generates uniformly intense, monochromatic pulses of light over a range of frequencies and duty cycles:
- Ojima (US 7167202) provide an image pick-up apparatus that can calculate intensity of light to be emitted from the stroboscope even if the distance measuring device has failed in measurement of the distance to the subject.
- Kitajima (US 5,808,681) provides an electronic still camera in which, even in a scene where a main object at which the light of a strobe can arrive and its background at which the strobe light cannot arrive are mixed, proper white balance can be made for the whole photographing image plane including the object and the background: and
- Nakayama (US 6,963,362) provides an image pickup apparatus capable of achieving optimum color balance when a picture is taken using a flash apparatus.

Inquiries

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kent Wang whose telephone number is 571-270-1703. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).
8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-270-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information

Art Unit: 2622

for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KW

7 April 2009

/Yogesh K Aggarwal/

Examiner, Art Unit 2622